

PCT/NL/99/00814

12

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New Claims

(41)

1. Method for the preparation of starch particles in a two-phase system, which method comprises the following steps:

- a) preparation of a first phase comprising a dispersion of starch in water;
- b) i) dispersion or emulsifying of a second phase, which is a hydrophobic phase in the first phase, such that an oil-in-water emulsion is obtained;
ii) inversion of the oil-in-water emulsion to a water-in-oil emulsion;
- c) cross-linking of the starch present in the first phase;
- d) separating the starch particles thus formed.

2. Method according to Claim 2, wherein the starch is completely or partially gelatinised before, during or after step b) ii).

3. Method according to Claim 1, wherein in step b) i) the hydrophobic phase:water ratio is 80:20 to 20:80, preferably 60:40 to 40:60.

4. Method according to Claim 1, 2 or 3 wherein the oil-in-water emulsion contains a surfactant.

5. Method according to Claim 4, wherein the surfactant has an HLB value of 8 to 20, preferably of 10 to 15.

6. Method according to Claim 4 or 5, wherein step b) ii) comprises raising the temperature of the oil-in-water emulsion until inversion takes place.

7. Method according to Claim 4 or 5, wherein step b) ii) comprises the addition of a second surfactant to the oil-in-water emulsion, such that inversion to a water-in-oil emulsion takes place.

8. Method according to Claim 4 or 5, wherein step b) ii) comprises the addition of a hydrophobic liquid to the oil-in-water emulsion such that inversion to a water-in-oil emulsion takes place.

PCT/NL/99/00814

13

9. Method for the preparation of starch particles in a two-phase system, which method comprises:

- a) preparation of a first phase comprising a dispersion of starch in water;
- b) addition of a second phase, which is a water-miscible non-solvent for starch to the first phase such that phase separation occurs;
- c) cross-linking of the starch present in the first phase; and
- d) separating the starch particles thus formed.

10. Method according to Claim 9, wherein the water-miscible non-solvent for starch is ethanol or acetone, preferably ethanol.

11. Method according to Claim 9 or 10, wherein the starch is completely or partially gelatinised before, during or after step b) or c).

12. Method according to one of the preceding claims, wherein the starch consists of partially modified starch.

13. Method according to one of the preceding claims, wherein the starch content in the first phase is 1 - 50 % (m/m), preferably 5 to 25 % (m/m).

14. Method according to one of the preceding claims, wherein cross-linking is carried out with the aid of a cross-linking agent, which is preferably trisodium trimetaphosphate or epichlorohydrin.

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